Journal of Forensic and Legal Medicine 20 (2013) 402–403

Contents lists available at SciVerse ScienceDirect

Journal of Forensic and Legal Medicine

journal homepage: www.elsevier.com/locate/jflm

Clinical practice

An approach to peer review in forensic pathology

D. Noel Sims B. Sc. Hons Manager [b], Neil E.I. Langlois M.D. Forensic pathologist [a,b], Roger W. Byard M.D. Forensic pathologist [a,b,*]

[a] The University of Adelaide Medical School, Frome Road, Adelaide, SA 5005, Australia
[b] Forensic Science SA, 21 Divett Place, Adelaide, SA 5000, Australia

ARTICLE INFO

Article history:
Received 19 September 2012
Accepted 9 February 2013
Available online 5 March 2013

Keywords:
Peer review
Forensic pathology
Autopsy
Audit

ABSTRACT

Peer review in forensic pathology has been a long time in evolution but may provide a very useful mechanism to check for, and to correct, errors, in addition to establishing an important educative vehicle for pathologists. A process is reported that has been established at our institution that involves both informal peer review in the mortuary and formal auditing of a set number of cases. Every autopsy case is discussed at a daily meeting of pathologists before a provisional cause of death is released. In addition, one in ten cases including all homicides, deaths in custody, suspicious and paediatric cases, and randomly selected additional cases undergo formal auditing by a second pathologist. Finally, administrative staff check the completed report. This formalized process, in a jurisdiction where autopsies are usually performed by only one pathologist, has been extremely useful in standardizing autopsy reports and in enabling pathologists to discuss cases and associated issues on a regular basis.

1. Introduction

One of the most difficult areas in all disciplines of medicine is ensuring good quality control of medical examinations, investigations and diagnoses. While performance standards and quality assurance programs have been formulated[1,2] less information is available on the process of individual peer review. Unfortunately physicians have tended to be not particularly effective at dealing with the issue of peer review as there has been, and often still is, a prevailing attitude of "there but for the grace of God go I". Personalities and egos being placed before issues have also been part of the problem, as high achieving medical graduates are often not willing to recognize, let alone discuss, perceived "failure" in themselves or in their colleagues. The competitive nature of some medical schools may foster an attitude of invincibility, which often does not lend itself to self-analysis and criticism. For this reason there have been instances over the years in many institutes of doctors who may not always be performing at an appropriate professional level, despite this being known by their colleagues. Auditing has often then been taken over by non-medically trained administrators or lawyers.

In an attempt to set up a framework to facilitate effective and acceptable peer-review for forensic pathology autopsies at Forensic Science SA the following system was developed. Forensic Science SA is the South Australian state forensic facility where all medico-legal autopsies from around the state are performed at the direction of the State Coroner. The population served is approximately 1.6 million. Approximately 1200 autopsies are performed each year by a staff of 5.3 fulltime equivalent pathologists.

Peer–review is undertaken on both an informal and a formal basis. The mortuary is not a particularly large area and holds three dissection bays with an adjacent special dissection room, which is usually open to the main area. Routine autopsies are generally performed on week-day mornings by several pathologists working in close proximity, which facilitates informal peer review and discussion of cases and findings. Once autopsy dissections have been completed, the pathologists responsible for the cases meet in one of the offices outside the mortuary for a presentation of the clinical details of each case, the autopsy findings, the proposed ancillary testing and the conclusions/diagnosis. The meeting and those who have attended is recorded in the case file, and the agreed upon provisional cause of death, in addition to associated details such as proposed tests and retained specimens (e.g. tissues for histology or blood for toxicology), are then forwarded to the State Coroner's office. If organ retention is proposed, such as the heart or brain for special examination, the necessity is discussed before a request is sent to the State Coroner for authorization. Every case has to

* Corresponding author. Discipline of Anatomy and Pathology, Level 3 Medical School North Building, The University of Adelaide, Frome Road, Adelaide, SA 5005, Australia.
E-mail address: roger.byard@sa.gov.au (R.W. Byard).

1752-928X/$ – see front matter
http://dx.doi.org/10.1016/j.jflm.2013.02.010

undergo this type of peer checking before any conclusions are released to the Coroner.

Homicides or suspicious cases are treated differently and are presented to the other pathologists over the body of the decedent so that findings can be demonstrated and conclusions explained. This is especially useful in reviewing the type and suggested sequence of injuries and in explaining reasons for the proposed cause and mechanism of death. In difficult cases involving infants or children a pathologist from the local paediatric hospital may be invited to participate in the autopsy. Formal presentation of cases referred for specialist neuropathological examination is undertaken every month by a neuropathologist.

The principal purpose of the initial case review process is to ensure that there is general agreement on the provisional cause of death that will be forwarded to the Coroner. These meetings can result in modification or changes to the proposed provisional cause of death; tests may be added, or withdrawn, and occasionally it may be determined necessary to perform further examination of the body before it can be released. If a pathologist subsequently wishes to alter the cause of death in the final report, a further review is required. These are called 'exit reviews' and also occur at the morning meeting of the pathologists. The inside cover of all case files has a box which must be ticked to note whether an exit review was either performed or not required. At an exit review the case details and any particularly difficult issues that have arisen are presented, with the reasons for the change of diagnosis being discussed. Thus all causes of death that are conveyed to the Coroner, either provisional or final, have been fully reviewed.

Once the autopsy report has been completed the file is transferred to administrative staff who ensure that certain categories of cases, including all deaths in custody and homicide and paediatric deaths are submitted for a 'technical review'. In addition, further cases are randomly chosen to ensure that overall 10% of cases will undergo this process of formal review. A second pathologist then checks the report and the conclusions based on the descriptions of the case, any ancillary tests and the histology. The reviewing pathologist does not necessarily have to completely agree with the conclusions, but must accept that they are reasonable with no obvious errors of fact. The second pathologist then signs and dates the case file to record the peer review. If the two pathologists disagree on a particular point, the case is taken back to the pathology group for an "exit" review. In the case where the reviewing pathologist still has a significant alternative opinion, this must be submitted in writing to the reporting pathologist who is obliged to acknowledge that such a disagreement exists in the final report. This alerts the State Coroner to possible limitations in the evidence. The dissenting view will then be detailed in a second report by the initial reviewer. The two reports are then forwarded as a combined report to the Coroner. Although this is regarded as an important method for recording major differences of opinion, it has not been required in the two years since its instigation.

Table 1
Summary of peer review process.

1. Informal discussion in mortuary
2. Daily formal individual case review by pathologists after autopsies have been completed
3. Formal peer checking of randomly selected cases by a second pathologist to ensure that one in ten are reviewed
4. Formal presentation of the case over the body of homicide and suspicious cases in the mortuary
5. Mandatory formal peer checking of homicides, deaths in custody, suspicious and paediatric cases
6. Possible involvement of a paediatric pathologist in paediatric cases
7. "Exit" review of difficult cases or cases where the cause of death has been changed from the provisional diagnosis
8. Formal mechanism in place for alternate opinions to be sent to the Coroner, if required
9. Once a month formal presentation of neuropathology cases by a neuropathologist
10. Finally, each case undergoes an administrative check by secretarial staff to check for typographical or transcription errors.

Finally each case file is taken by the administrative staff who proof read it for errors in spelling, as well as checking for typographical and transcription errors. Finally they organize the paperwork and list and paginate all documents in the folder.

This detailed process of peer review operates at several levels (Table 1) and has been in use for a number of years now with excellent results. Although it may seem initially onerous, it has enabled careful checking of cases prior to reports being released from the Department. The number of cases requiring supplementary or reissued reports for errors has declined, greater uniformity in approach has been achieved, and the pathologists' review sessions act as educative processes, as well as simple audit exercises. Other forensic departments may consider that there is insufficient time for review processes such as these, but we have found that the time spent on such rigorous reviews may be far less than is incurred in dealing with errors or complex issues that are only identified after reports have been released.

Ethical approval

The ethical approval was given by Forensic Science South Australia.

Funding

None.

Conflict of interest

None.

References

1. Peteron GF, Clark SC. Forensic autopsy performance standards. *Am J Forensic Pathol Med* 2006;**27**:200–25.
2. Reichard RR. A quality assurance strategy for forensic pathology. *Acad For Path* 2011;**1**:8–13.